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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/010,412 | 12/07/2001 | Russel Shirley | AMDA.499C1 (TT4002/03C1) | 6042 |

7590 10/09/2002

Attention of: Robert J. Crawford
CRAWFORD PLLC
Suite 390
1270 Northland Drive
St. Paul, MN 55120

EXAMINER

RODRIGUEZ, PAUL L

ART UNIT

PAPER NUMBER

2125

DATE MAILED: 10/09/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/010,412

Applicant(s)

SHIRLEY ET AL.

Examiner

Paul L Rodriguez

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. The amendment filed 9/10/02 has been received and considered. Claims 1-6, 8-15 are presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

3. Claims 1-6, and 9-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Wiesler et al (US2001/0047222). The claimed invention reads on Wiesler et al as follows:

Wiesler et al discloses (claim 1) a computer-based automated method for tracking the movement of masks (reticle, paragraph 14 lines 1-2) used in a wafer processing facility (paragraphs 5, 15-17), the masks being moved in mask pods (reticle carriers, paragraphs 5, 6), the method comprising for each mask, generating mask data that includes a mask identification code (figures 3a, paragraph 19), using a computer (reference number 204) to process the mask data, including cross-referencing respective mask identification codes to pod identification codes (figure 3A, Reticle ID, Reticle Carrier ID, paragraph 19, claims 3, 4), updating the mask data to include a facility location identification code (storage of reticle in stocker, figure 3B, Current Location), (claim 2) wherein said updating occurs as each mask moves to a subsequent location

Art Unit: 2125

during wafer processing (figure 3B, including current and last locations) and said updating includes adding a tool identification code to the mask data set when the mask arrives to a tool location (processing stations, paragraph 15, figure 3B, current and last locations), (claim 3) after said updating, further including creating a historical database for the mask data corresponding to each mask and tracking the movement of each mask when the mask arrives to a new location (paragraph 5, figure 3B, current and last locations, paragraph 19), (claim 4) after the updating step, further including the step of providing a material control system that sends a selected mask to a new location (paragraph 17), thereby triggering all update of the mask data set for the selected mask when the mask arrives to the new location (paragraphs 5, 17), (claim 5) further including storing mask data (paragraphs 5, 19, figure 3), (claim 6) wherein storing mask data includes using the computer to track the condition of each mask (paragraphs 5, 17, 20), the mask condition including particle contamination, mask degradation, number of exposures, number of times mask is handled and mask structural defects (figure 3E, reference number 310), wherein the masks are selected from the group consisting of reticles, wafer processing masks and solder bump masks (paragraph 14), (claim 9) further including matching the mask to a carrier (figure 3A, reticle ID, reticle carrier ID), the carrier having a carrier identification code (reticle carrier ID, figure 3B) and storing the carrier identification code data as part of the mask data (figure 3B, paragraph 19), (claim 10) further including tracking the mask movement from a material stocker, through a stepper and through an inspection tool while in a mask pod (paragraphs 15, 16), (claim 11) a system (figure 2, paragraphs 17, 18) for tracking the movement of masks used in a wafer processing facility (paragraphs 5, 6), the masks being moved in mask pods (reticle carriers), the system comprising for each mask, means for generating mask data that includes a mask

identification code (figure 3A, paragraph 19), and computer means for processing the mask data (reference numbers 202, 204), including cross-referencing respective mask identification codes to pod identification codes (figure 3A, reticle ID, reticle carrier ID, paragraph 19, claims 3, 4) and updating the mask data to include a facility location identification code (storage of reticle in stocker, figure 3B, current location), (claim 12) further including a material handling system adapted to move the masks and mask pods to multiple locations in the wafer processing facility (paragraph 16), (claim 13) wherein the mask data set further includes a tool identification code, generated when the mask arrives to a new tool location, that is stored in the computer means (figure 3B, current and last location, processing station, paragraph 15), (claim 14) a computer-based automated method for tracking the movement of masks (reticles) used in a wafer processing facility (paragraphs 5, 6), the masks being moved in mask pods (reticle carriers, paragraphs 5, 6), the method comprising for each mask, generating mask data that includes a mask identification code (figure 3A, paragraph 19), using a computer (reference number 204) to process the mask data, including cross-referencing respective mask identification codes to pod identification codes (figure 3A, reticle ID, reticle carrier ID, paragraph 19, claims 3, 4) and updating the mask data to include a facility location identification code (storage of reticle in stocker, figure 3B, current location), conducting a degradation analysis on each mask that includes a comparison of the mask data to a mask baseline specification so as to generate degradation data for each mask (figure 3B, inspection, figure 3E, inspection results, paragraph 20), and analyzing and tracking the mask degradation data to determine the useful life of each mask (paragraph 20).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiesler et al (US 2001/0047222 A1) in view of Terao (U.S. Pat 5,191,535).

Wiesler et al teaches most all of the instant invention as applied to claims 1-7 and 9-14 above. Wiesler et al fails to teach wherein said storing mask data includes using the computer to match a reticle serial number and a wafer lot to an event on a processing line.

Terao teaches using the computer to match a reticle serial number and a wafer lot to an event on a processing line (col. 1 lines 32-55).

Wiesler et al and Terao are analogous art because they are both directed to a reticle or mask handling systems.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the matching of reticles to wafer lots of Terao in the reticle management system of Wiesler et al because Terao teaches that the identification of a “to be processed lot” and mask prior to processing by a production unit reduces standing time of the production unit, therefore reducing overall production time (col. 3 lines 5-12), using a computer control system is also known and taught to provide faster processing of mask data, which was previously done manually (col. 1 lines 10-20), these reasons provide adequate motivation to combine the teachings of these references.

Response to Arguments

6. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

Regarding the double patenting rejection and terminal disclaimer, the terminal disclaimer has been recorded and the double patenting rejection has been overcome.

Regarding the claim objections and 112 rejections. The submitted amendment corrected the cited deficiencies and these rejections and objections have been withdrawn.

Regarding the 102(a) rejection, the rejection has been changed to a 102(e) rejection. The 102(e) rejection is proper based upon the filing date of the current continuing application.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge

Art Unit: 2125

generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the teachings of using a computer to match a reticle / mask with a wafer lot is considered to be taught by Terao. This teaching in combination with Wiesler et al is considered proper because Terao teaches that the use of the computer improves productivity by reducing wasted standing by time. Examiner considers the combination of art as proper.

Terminal Disclaimer

7. The terminal disclaimer filed on 9/10/02 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of Patent Number 6,351,6847 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Conboy et al (U.S. Pat 6,457,587) – directed toward computer controlled reticle sorter and stocker.

Conboy et al (U.S. Pat 6,403,905) – directed toward computer controlled reticle sorter and stocker management system.

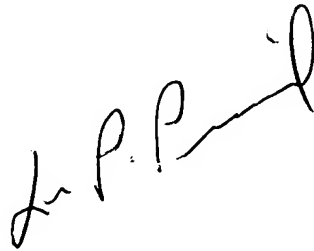
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul L Rodriguez whose telephone number is (703) 305-7399. The examiner can normally be reached on 6:30 - 4:00 M-Th and alternate F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P Picard can be reached on (703) 308-0538. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

Paul L Rodriguez
Examiner
Art Unit 2125

PLR
October 2, 2002



LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100